AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (Currently amended): A microwave heating apparatus for radiating a microwave oscillated from a magnetron to a heating chamber via a waveguide,

wherein a plurality of electricity feeding ports for radiating the microwave are provided at a ceiling wall of the heating chamber, and

the wave guide is formed in an L-like shape including a side waveguide extended upwardly along an outer side face of the heating chamber such that the side waveguide is in direct contact with the outer side face of the heating chamber and an upper waveguide extended from an upper end of the side wave guide to the plurality of electricity feeding ports along an outer face of the ceiling wall,

wherein the plurality of electricity feeding ports are formed by at least two or more kinds of electricity feeding ports having different shapes and opening areas,

wherein when the plurality of electricity feeding ports are aligned in a front and rear direction of the ceiling wall, the opening area of the electricity feeding port at a position proximate to a center of the ceiling wall is set to be larger than the opening area of the electricity feeding port at a position remote from the center of the ceiling wall, and

the opening area of the electricity feeding port at a position proximate to the center of the ceiling wall reaches one end of the waveguide, and the opening area of the electricity feeding port at a position remote from the center of the ceiling wall does not reach a rear waveguide wall,

wherein a distance between an antenna of the magnetron and a center of the opening area of each of the electricity feeding port at a position proximate to the center of the ceiling wall and

the electricity feeding port at a position remote from the center of the ceiling wall ~~and an antenna of the magnetron~~ is g/2 multiplied by an integer, wherein g is a wavelength of the microwave propagated at an inside of the waveguides, and

wherein an inclined face is formed at a connecting portion between the upper waveguide and the side waveguide.

Claim 2 (Previously presented): The microwave heating apparatus according to Claim 1, wherein the antenna of the magnetron is arranged to be directed to a side of the heating chamber and to be opposed to the side wall and the side wall is formed with a bulged portion bulged to an inner side of the chamber for avoiding interference with the antenna.

Claim 3 (Previously presented): The microwave heating apparatus according to Claim 1, wherein the plurality of electricity feeding ports are formed in a rectangular shape slender in a width direction of the heating chamber.

Claims 4-7 (Cancelled):

Claim 8 (Currently amended): The microwave heating apparatus according to Claim 1, wherein a heating member in a linear shape for heating by a heater is ~~mounted~~ attached to the ceiling wall of the heating chamber and a center axis of the heating member is constituted to be more proximate to a line equally dividing the ceiling wall into two in a front and rear direction than a center axis line in a width direction of the upper wave guide arranged at the ceiling wall.

Claim 9 (Original): The microwave heating apparatus according to Claim 8, wherein the heating member is arranged to be inclined to the line equally dividing the ceiling wall into two in the front and rear direction.

Claim 10 (Cancelled):

Claim 11 (Previously presented): The microwave heating apparatus according to Claim 1, wherein the heating member is positioned such that a horizontal centerline of the heating member is located above the opening areas of the plurality of feeding ports.

Claim 12 (Currently amended): A microwave heating apparatus for radiating a microwave oscillated from a magnetron to a heating chamber via a waveguide,

wherein a plurality of electricity feeding ports for radiating the microwave are provided at a ceiling wall of the heating chamber, and

the wave guide is formed in an L-like shape including a side waveguide extended upwardly along an outer side face of the heating chamber and an upper waveguide extended from an upper end of the side wave guide to the plurality of electricity feeding ports along an outer face of the ceiling wall,

wherein the plurality of electricity feeding ports are formed by at least two or more kinds of electricity feeding ports having different shapes and opening areas,

wherein when the plurality of electricity feeding ports are aligned in a front and rear direction of the ceiling wall, the opening area of the electricity feeding port at a position

proximate to a center of the ceiling wall is set to be larger than the opening area of the electricity feeding port at a position remote from the center of the ceiling wall, and

the opening area of the electricity feeding port at a position proximate to the center of the ceiling wall reaches one end of the waveguide, and the opening area of the electricity feeding port at a position remote from the center of the ceiling wall does not reach a rear waveguide wall,

wherein a distance between an antenna of the magnetron and a center of the opening area of each of the electricity feeding port at a position proximate to the center of the ceiling wall and the electricity feeding port at a position remote from the center of the ceiling wall ~~and an antenna of the magnetron~~ is g/2 multiplied by an integer, wherein g is a wavelength of the microwave propagated at an inside of the waveguides, and

wherein an inclined face is formed at a connecting portion between the upper waveguide and the side waveguide.

Claim 13 (Previously presented): The microwave heating apparatus according to Claim 1, wherein the magnetron is disposed adjacent to the side surface at the lateral side of the heating chamber and adjacent an end of the side wave guide that is extended away from the upper wave guide.

Claim 14 (Previously presented): The microwave heating apparatus according to Claim 12, wherein the magnetron is disposed adjacent to the side surface at the lateral side of the heating chamber and adjacent an end of the side wave guide that is extended away from the upper wave guide.

Claim 15 (Previously presented): The microwave heating apparatus according to Claim 1, wherein a heating member in a linear shape for heating by a heater is mounted in a recessed portion of the ceiling wall of the heating chamber and the plurality of electricity feeding ports are mounted to the ceiling wall, both the heating member and the plurality of electricity feeding ports being mounted at a position away from a line equally dividing the ceiling wall into two in a front and rear direction.

Claim 16 (Cancelled):

Claim 17 (Previously presented): The microwave heating apparatus of claim 12 wherein a width of the waveguide is greater than $\lambda_0/2$ and less than λ_0 and the height of the waveguide is less than $\lambda_0/2$, wherein λ_0 is a wavelength of the microwave in a free space.

Claim 18 (New): The microwave heating apparatus according to Claim 1, wherein the upper waveguide has opposing first and second ends, the first end is connected to the upper end of the side waveguide, and the opening area of the electricity feeding port at a position proximate to the center of the ceiling wall reaches the second end.

Claim 19 (New): The microwave heating apparatus according to Claim 1, wherein the upper waveguide has opposing first and second ends, the first end is connected to the upper end of the side waveguide, and both the opening area of the electricity feeding port at a position

proximate to the center of the ceiling wall and the opening area of the electricity feeding port at a position remote from the center of the ceiling wall reach the second end.

Claim 20 (New): The microwave heating apparatus according to Claim 1, wherein the upper waveguide has opposing first and second ends, the first end is connected to the upper end of the side waveguide, and a distance between the second end of the upper waveguide and an antenna of the magnetron is g multiplied by an integer.